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## **WE CLAIM**:

1. A method of treating stuttering or another communication disorder, comprising administering to a patient in need of such treatment an effective amount of a norepinephrine reuptake inhibitor selected from the group consisting of:

atomoxetine or a pharmaceutically acceptable salt thereof; racemic reboxetine or a pharmaceutically acceptable salt thereof; (S,S) reboxetine or a pharmaceutically acceptable salt thereof; a compound of formula (I):

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wherein X is  $C_1$ - $C_4$  alkylthio, and Y is  $C_1$ - $C_2$  alkyl, or a pharmaceutically acceptable salt thereof;

a compound of formula (IA):

$$\begin{array}{c|c}
R10 & R8 & H & R2 & R3 \\
\hline
R10 & R8 & H & R2 & R3 \\
\hline
R10 & R8 & R1 & R2 & R3 \\
\hline
R10 & R8 & R2 & R3 & R4 \\
\hline
R20 & R3 & R4 & R5 & R5
\end{array}$$
(IA)

wherein n is 1, 2 or 3; R1 is  $C_2$ - $C_{10}$ alkyl,  $C_2$ - $C_{10}$ alkenyl,  $C_3$ - $C_8$ cycloalkyl or  $C_4$ - $C_{10}$ cycloalkylalkyl, wherein one C-C bond within any cycloalkyl moiety is optionally substituted by an O-C or C=C bond and wherein each group is optionally substituted with from 1 to 7 halogen substituents and/or with from 1 to 3 substituents each independently

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selected from hydroxy, cyano, C<sub>1</sub>-C<sub>4</sub>alkyl and C<sub>1</sub>-C<sub>4</sub>alkoxy; R2 is H, C<sub>1</sub>-C<sub>4</sub>alkyl (optionally substituted with from 1 to 7 halogen atoms), C<sub>1</sub>-C<sub>4</sub>alkyl-S(O)<sub>x</sub>- wherein x is 0, 1 or 2 (optionally substituted with from 1 to 7 halogen atoms), C<sub>1</sub>-C<sub>4</sub>alkoxy (optionally substituted with from 1 to 7 halogen atoms), cyano, halogen, phenyl 5 (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C<sub>1</sub>-C<sub>4</sub>alkyl and C<sub>1</sub>-C<sub>4</sub>alkoxy), phenoxy (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C1-C4alkyl and C1-C4alkoxy) or -CO<sub>2</sub>(C<sub>1</sub>-C<sub>4</sub>alkyl), or together with R3 forms a further benzene ring (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C1-10 C4alkyl and C1-C4alkoxy); R3 is H, C1-C4alkyl (optionally substituted with from 1 to 7 halogen atoms), C<sub>1</sub>-C<sub>4</sub>alkyl-S(O)<sub>x</sub>- wherein x is 0, 1 or 2 (optionally substituted with from 1 to 7 halogen atoms), C<sub>1</sub>-C<sub>4</sub>alkoxy (optionally substituted with from 1 to 7 halogen atoms), cyano, halogen, phenyl (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C<sub>1</sub>-C<sub>4</sub>alkyl and C<sub>1</sub>-C<sub>4</sub>alkoxy), phenoxy (optionally substituted with from 1 to 3 substituents each independently selected 15 from halogen, C<sub>1</sub>-C<sub>4</sub>alkyl and C<sub>1</sub>-C<sub>4</sub>alkoxy) or -CO<sub>2</sub>(C<sub>1</sub>-C<sub>4</sub>alkyl), or together with R2 or R4 forms a further benzene ring (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C1-C4alkyl and C1-C4alkoxy); R4 is H, C1-C<sub>4</sub>alkyl (optionally substituted with from 1 to 7 halogen atoms), C<sub>1</sub>-C<sub>4</sub>alkyl-S(O)<sub>x</sub>-20 wherein x is 0, 1 or 2 (optionally substituted with from 1 to 7 halogen atoms), C<sub>1</sub>-C4alkoxy (optionally substituted with from 1 to 7 halogen atoms), cyano, halogen, phenyl (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C<sub>1</sub>-C<sub>4</sub>alkyl and C<sub>1</sub>-C<sub>4</sub>alkoxy), phenoxy (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C1-C4alkyl and C1-C4alkoxy) or 25 -CO<sub>2</sub>(C<sub>1</sub>-C<sub>4</sub>alkyl), or together with R3 forms a further benzene ring (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C<sub>1</sub>-C4alkyl and C1-C4alkoxy); R5 is H, C1-C4alkyl (optionally substituted with from 1 to 7 halogen atoms), C<sub>1</sub>-C<sub>4</sub>alkoxy (optionally substituted with from 1 to 7 halogen atoms) or

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halogen; R6 is H, C<sub>1</sub>-C<sub>4</sub>alkyl (optionally substituted with from 1 to 7 halogen atoms), C<sub>1</sub>-C<sub>4</sub>alkoxy (optionally substituted with from 1 to 7 halogen atoms) or halogen; R7 is H or C<sub>1</sub>-C<sub>4</sub>alkyl; R8 is H or C<sub>1</sub>-C<sub>4</sub>alkyl; R9 is H, halogen, hydroxy, cyano, C<sub>1</sub>-C<sub>4</sub>alkyl or C<sub>1</sub>-C<sub>4</sub>alkoxy; and R10 is H, halogen, hydroxy, cyano, C<sub>1</sub>-C<sub>4</sub>alkyl or C<sub>1</sub>-C<sub>4</sub>alkoxy; or a pharmaceutically acceptable salt thereof, with the proviso that the compound N-ethyl-N-benzyl-4-piperidinamine is excluded;

a compound of formula (IB):

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wherein Rx is H; Ry is H or C<sub>1</sub>-C<sub>4</sub> alkyl; each Rz is independently H or C<sub>1</sub>-C<sub>4</sub> alkyl; X represents O; Y represents OH or OR; R is C<sub>1</sub>-C<sub>4</sub> alkyl; Ar<sub>1</sub> is a phenyl ring or a 5- or 6-membered heteroaryl ring each of which may be substituted with 1, 2, 3, 4 or 5 substituents (depending upon the number of available substitution positions) each independently selected from C<sub>1</sub>-C<sub>4</sub> alkyl, O(C<sub>1</sub>-C<sub>4</sub> alkyl), S(C<sub>1</sub>-C<sub>4</sub> alkyl), halo, hydroxy, pyridyl, thiophenyl and phenyl optionally substituted with 1, 2, 3, 4 or 5 substituents each independently selected from halo, C<sub>1</sub>-C<sub>4</sub> alkyl, or O(C<sub>1</sub>-C<sub>4</sub> alkyl); and Ar<sub>2</sub> is a phenyl ring or a 5- or 6-membered heteroaryl ring each of which may be substituted with 1, 2, 3, 4 or 5 substituents (depending upon the number of available substitution positions) each independently selected from C<sub>1</sub>-C<sub>4</sub> alkyl, O(C<sub>1</sub>-C<sub>4</sub> alkyl) and halo; wherein each above-mentioned C<sub>1</sub>-C<sub>4</sub> alkyl group is optionally substituted with one or more halo atoms; or a pharmaceutically acceptable salt thereof;

a compound of formula (IC)

$$\begin{array}{c|c}
R^1 & O & R' \\
R^1 & O & X \\
R^1 & R & R^1
\end{array}$$
(IC)

wherein: A is S or O; R is H; Ar is a phenyl group optionally substituted with 1, 2, 3, 4 or 5 substituents each independently selected from C<sub>1</sub>-C<sub>4</sub> alkyl, O(C<sub>1</sub>-C<sub>4</sub> alkyl), S(C<sub>1</sub>-C<sub>4</sub> alkyl), halo, hydroxy, CO<sub>2</sub>(C<sub>1</sub>-C<sub>4</sub> alkyl), pyridyl, thiophenyl and phenyl optionally substituted with 1, 2, 3, 4 or 5 substituents each independently selected from halo, C<sub>1</sub>-C<sub>4</sub> alkyl, or O(C<sub>1</sub>-C<sub>4</sub> alkyl); X is a phenyl group optionally substituted with 1, 2, 3, 4 or 5 substituents each independently selected from halo, C<sub>1</sub>-C<sub>4</sub> alkyl, or O(C<sub>1</sub>-C<sub>4</sub> alkyl); a C<sub>1</sub>-C<sub>4</sub> alkyl group; a C<sub>3</sub>-C<sub>6</sub> cycloalkyl group or a CH<sub>2</sub>(C<sub>3</sub>-C<sub>6</sub> cycloalkyl) group; R' is H or C<sub>1</sub>-C<sub>4</sub> alkyl; each R<sup>1</sup> is independently H or C<sub>1</sub>-C<sub>4</sub> alkyl; wherein each above-mentioned C<sub>1</sub>-C<sub>4</sub> alkyl group is optionally substituted with one or more halo atoms; or a pharmaceutically acceptable salt thereof; with the proviso that, when A is O, X is a C<sub>1</sub>-C<sub>4</sub> alkyl group, a C<sub>3</sub>-C<sub>6</sub> cycloalkyl group or a CH<sub>2</sub>(C<sub>3</sub>-C<sub>6</sub> cycloalkyl) group;

## a compound of formula (ID)

$$\begin{array}{c|c}
R^{3} & CH_{2} \\
N & O \\
Ar
\end{array}$$
(ID)

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wherein -X- is  $-C(R^4R^5)$ -, -O- or -S-; n is 2 or 3;  $R^1$  is H or  $C_1$ - $C_4$  alkyl;  $R^3$  is H, halo,  $C_1$ - $C_4$  alkyl,  $O(C_1$ - $C_4$  alkyl), nitrile, phenyl or substituted phenyl;  $R^4$  and  $R^5$  are each independently selected from H or  $C_1$ - $C_4$  alkyl; Ar- is selected from the group consisting of

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(i) 
$$R^{2a}$$
 and (ii)  $R^{2e}$   $R^{2d}$ 

in which R<sup>2a</sup> is H, halo, methyl or ethyl; R<sup>2b</sup> is H, halo or methyl; R<sup>2c</sup> is H, halo, methyl, trifluoromethyl, nitrile, or methoxy; R<sup>2d</sup> is H, halo, methyl or ethyl; R<sup>2e</sup> is H, halo, methyl, trifluoromethyl, nitrile, or methoxy; R<sup>2f</sup> is H, or fluoro; -Y- is -O-, -S- or -N(R<sup>6</sup>)-; and R<sup>6</sup> is H or methyl or a pharmaceutically acceptable salt thereof; a compound of formula (IE)

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$$\begin{array}{c|c}
R^2 & R^1 \\
N & N \\
N & R^3 & R^4
\end{array}$$
(IE)

wherein  $R^1$  is  $C_1$ - $C_6$  alkyl (optionally substituted with 1, 2 or 3 halo substituents and/or with 1 substituent selected from -S-( $C_1$ - $C_3$  alkyl), -O-( $C_1$ - $C_3$  alkyl) (optionally substituted with 1, 2 or 3 F atoms), -O-( $C_3$ - $C_6$  cycloalkyl), -SO<sub>2</sub>-( $C_1$ - $C_3$  alkyl), -CN, -COO-( $C_1$ - $C_2$  alkyl) and -OH);  $C_2$ - $C_6$  alkenyl; -( $C_1$ - $C_2$ - $C_6$  alkenyl; -( $C_1$ - $C_2$ - $C_6$ - $C_1$ - $C_2$ - $C_2$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_1$ - $C_2$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_1$ - $C_2$ - $C_1$ - $C_2$ - $C_3$ - $C_1$ - $C_2$ - $C_2$ - $C_1$ - $C_2$ - $C_1$ - $C_2$ - $C_2$ - $C_1$ - $C_2$ - $C_1$ - $C_2$ - $C_2$ - $C_1$ - $C_2$ - $C_2$ - $C_2$ - $C_1$ - $C_2$ - $C_2$ - $C_2$ - $C_1$ - $C_2$ -

$$(CH_2)_{\mathsf{r}}$$
  $(CR^5R^6)_{\mathsf{s}}$   $(CR^7R^8)_{\mathsf{t}}$   $(CR^7R^8)_{\mathsf{t}}$   $(CR^7R^8)_{\mathsf{t}}$   $(CR^7R^8)_{\mathsf{t}}$   $(CR^7R^8)_{\mathsf{t}}$   $(CR^7R^8)_{\mathsf{t}}$   $(CR^7R^8)_{\mathsf{t}}$   $(CR^7R^8)_{\mathsf{t}}$ 

 $R^2$ ,  $R^3$  and  $R^4$  are each independently selected from hydrogen or  $C_1$ - $C_2$  alkyl;  $R^5$ ,  $R^6$ ,  $R^7$  and  $R^8$  are at each occurrence independently selected from hydrogen or  $C_1$ - $C_2$  alkyl; -X- is a bond, -CH<sub>2</sub>-, -CH=CH-, -O-, -S-, or -SO<sub>2</sub>-; -Y- is a bond, -CH<sub>2</sub>- or -O-; -Z is hydrogen, -OH or -O-( $C_1$ - $C_3$  alkyl); p is 0, 1 or 2; q is 0, 1 or 2; r is 0 or 1; s is 0, 1, 2 or 3; t is 0, 1, 2 or 3; Ar<sub>1</sub> is phenyl, pyridyl, thiazolyl, benzothiophenyl or naphthyl; wherein said phenyl, pyridyl or thiazolyl group may be substituted with 1, 2 or 3 substituents each independently selected from halo, cyano,  $C_1$ - $C_4$  alkyl (optionally

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substituted with 1, 2 or 3 F atoms), -O-(C<sub>1</sub>-C<sub>4</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms) and -S-(C<sub>1</sub>-C<sub>4</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms) and/or with 1 substituent selected from pyridyl, pyrazole, phenyl (optionally substituted with 1, 2 or 3 halo substituents) and phenoxy (optionally substituted with 1, 2 or 3 halo substituents); and wherein said benzothiophenyl or naphthyl group may be optionally substituted with 1, 2 or 3 substituents each independently selected from halo, cyano, C<sub>1</sub>-C<sub>4</sub> alkyl (optionally substituted with 1, 2 or 3 F atoms), -O-(C1-C4 alkyl) (optionally substituted with 1, 2 or 3 F atoms), and -S-(C<sub>1</sub>-C<sub>4</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms); Ar2 is naphthyl, pyridyl, thiazolyl, furyl, thiophenyl, benzothiophenyl, or phenyl, wherein said naphthyl, pyridyl, thiazolyl, furyl, thiophenyl, benzothiophenyl, or phenyl may be substituted with 1, 2 or 3 substituents each independently selected from halo, C<sub>1</sub>-C<sub>4</sub> alkyl (optionally substituted with 1, 2 or 3 F atoms) and -O-(C<sub>1</sub>-C<sub>4</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms); or a pharmaceutically acceptable salt thereof; provided that (a) the cyclic portion of the group of formula (i) must contain at least three carbon atoms and not more than seven ring atoms; (b) when -X- is -CH=CH-, then the cyclic portion of the group of formula (i) must contain at least five carbon atoms; and (c) when -Z is -OH or -O-(C<sub>1</sub>-C<sub>3</sub> alkyl), then -X- is -CH<sub>2</sub>-; (d) when -Y- is -O- then p cannot be 0; and (e) the compound 3-[(phenylmethyl)-(3S)-3-pyrrolidinylamino]propanenitrile is excluded;

a compound of formula (IF)

$$\begin{array}{c|c}
R^2 & R^1 \\
\hline
 & N \\
 & R^3 & R^4
\end{array}$$
(IF)

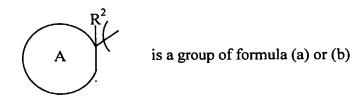
wherein

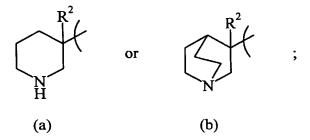
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R<sup>1</sup> is C<sub>1</sub>-C<sub>6</sub> alkyl (optionally substituted with 1, 2 or 3 halo substituents and/or with 1 substituent selected from -S-(C<sub>1</sub>-C<sub>3</sub> alkyl), -O-(C<sub>1</sub>-C<sub>3</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms), -O-(C<sub>3</sub>-C<sub>6</sub> cycloalkyl), -SO<sub>2</sub>-(C<sub>1</sub>-C<sub>3</sub> alkyl), -CN, -COO-(C<sub>1</sub>-C<sub>2</sub> alkyl) and -OH); C<sub>2</sub>-C<sub>6</sub> alkenyl; -(CH<sub>2</sub>)<sub>q</sub>-Ar<sub>2</sub>; or a group of formula (i) or (ii)

$$(CH_2)_r$$
  $Z$   $(CR^5R^6)_s$   $(CH_2)_r$   $(CR^5R^6)$   $(CH_2)_p$   $(CR^7R^8)_r$   $(CR^7R^$ 

 $R^2$ ,  $R^3$  and  $R^4$  are each independently selected from hydrogen or  $C_1$ - $C_2$  alkyl;  $R^5$ ,  $R^6$ ,  $R^7$  and  $R^8$  are at each occurrence independently selected from hydrogen or  $C_1$ - $C_2$  alkyl; -X- is a bond, -CH<sub>2</sub>-, -CH=CH-, -O-, -S-, or -SO<sub>2</sub>-; -Y- is a bond, -CH<sub>2</sub>- or -O-; -Z is hydrogen, -OH or -O-( $C_1$ - $C_3$  alkyl); p is 0, 1 or 2; q is 0, 1 or 2; r is 0 or 1; s is 0, 1, 2 or 3; t is 0, 1, 2 or 3; Ar<sub>1</sub> is phenyl, pyridyl, thiazolyl, benzothiophenyl or naphthyl; wherein said phenyl, pyridyl or thiazolyl group may be substituted with 1, 2 or 3 substituents each independently selected from halo, cyano,  $C_1$ - $C_4$  alkyl (optionally substituted with 1, 2 or 3 F atoms) and -S-( $C_1$ - $C_4$  alkyl) (optionally substituted with 1, 2 or 3 F atoms) and -S-( $C_1$ - $C_4$  alkyl) (optionally substituted with 1, 2 or 3 halo substituents), benzyl and phenoxy (optionally substituted with 1, 2 or 3 halo substituents); and wherein said benzothiophenyl or naphthyl group may be optionally substituted with 1, 2 or 3

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substituents each independently selected from halo, cyano, C<sub>1</sub>-C<sub>4</sub> alkyl (optionally substituted with 1, 2 or 3 F atoms), -O-(C<sub>1</sub>-C<sub>4</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms), and -S-(C<sub>1</sub>-C<sub>4</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms); Ar<sub>2</sub> is naphthyl, pyridyl, thiazolyl, furyl, thiophenyl, benzothiophenyl, or phenyl, wherein said naphthyl, pyridyl, thiazolyl, furyl, thiophenyl, benzothiophenyl, or phenyl may be substituted with 1, 2 or 3 substituents each independently selected from halo, C<sub>1</sub>-C<sub>4</sub> alkyl (optionally substituted with 1, 2 or 3 F atoms) and -O-(C<sub>1</sub>-C<sub>4</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms); or a pharmaceutically acceptable salt thereof; provided that (a) the cyclic portion of the group of formula (i) must contain at least three carbon atoms and not more than seven ring atoms; (b) when -X- is -CH=CH-, then the cyclic portion of the group of formula (i) must contain at least five carbon atoms; and (c) when -Z is -OH or -O-(C<sub>1</sub>-C<sub>3</sub> alkyl), then -X- is -CH<sub>2</sub>-; and (d) when -Y- is -O- then p cannot be 0; and

## a compound of formula (IG)

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wherein -X- is -S- or -O-; each R is independently selected from H or  $C_1$ - $C_4$  alkyl;  $R^1$  is H,  $C_1$ - $C_4$  alkyl,  $C_1$ - $C_4$  alkoxy, halo, cyano, trifluoromethyl, trifluoromethoxy, -NR<sup>3</sup>R<sup>4</sup>, -CONR<sup>3</sup>R<sup>4</sup>, -COOR<sup>3</sup> or a group of the formula (i)

$$-z$$
 $R^5$ 

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 $R^2$  is  $C_1$ - $C_4$  alkyl, phenyl or phenyl substituted with 1, 2 or 3 substituents each independently selected from  $C_1$ - $C_4$  alkyl,  $C_1$ - $C_4$  alkoxy, nitro, hydroxy, cyano, halo,

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trifluoromethyl, trifluoromethoxy, benzyl, benzyloxy,  $-NR^6R^7$ ,  $-CONR^6R^7$ ,  $COOR^6$ ,  $-SO_2NR^6R^7$  and  $-SO_2R^6$ ;  $R^5$  is selected from  $C_1$ - $C_4$  alkyl,  $C_1$ - $C_4$  alkoxy, carboxy, nitro, hydroxy, cyano, halo, trifluoromethyl, trifluoromethoxy, benzyl, benzyloxy,  $-NR^8R^9$ ,  $-CONR^8R^9$ ,  $-SO_2NR^8R^9$  and  $-SO_2R^8$ ;  $R^3$ ,  $R^4$ ,  $R^6$ ,  $R^7$ ,  $R^8$  and  $R^9$  are each independently selected from H or  $C_1$ -  $C_4$  alkyl; and -Z- is a bond,  $-CH_2$ -, or -O-; or a pharmaceutically acceptable salt thereof.

2. Use of a norepinephrine reuptake inhibitor selected from the group consisting

atomoxetine or a pharmaceutically acceptable salt thereof; racemic reboxetine or a pharmaceutically acceptable salt thereof; (S,S) reboxetine or a pharmaceutically acceptable salt thereof; a compound of formula (I):

wherein X is  $C_1$ - $C_4$  alkylthio, and Y is  $C_1$ - $C_2$  alkyl, or a pharmaceutically acceptable salt thereof;

a compound of formula (IA):

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of:

$$\begin{array}{c|c}
R10 & R8 & H \\
\hline
R8 & H \\
R9 & R7 \\
\hline
R6 & R5
\end{array}$$
(IA)

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wherein n is 1, 2 or 3; R1 is C2-C10alkyl, C2-C10alkenyl, C3-Cgcycloalkyl or C<sub>4</sub>-C<sub>10</sub>cycloalkylalkyl, wherein one C-C bond within any cycloalkyl moiety is optionally substituted by an O-C or C=C bond and wherein each group is optionally substituted with from 1 to 7 halogen substituents and/or with from 1 to 3 substituents each independently selected from hydroxy, cyano, C1-C4alkyl and C1-C4alkoxy; R2 is H, C1-C4alkyl (optionally substituted with from 1 to 7 halogen atoms),  $C_1$ - $C_4$ alkyl- $S(O)_x$ - wherein x is 0, 1 or 2 (optionally substituted with from 1 to 7 halogen atoms), C<sub>1</sub>-C<sub>4</sub>alkoxy (optionally substituted with from 1 to 7 halogen atoms), cyano, halogen, phenyl (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C<sub>1</sub>-C<sub>4</sub>alkyl and C<sub>1</sub>-C<sub>4</sub>alkoxy), phenoxy (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C1-C4alkyl and C1-C4alkoxy) or -CO<sub>2</sub>(C<sub>1</sub>-C<sub>4</sub>alkyl), or together with R3 forms a further benzene ring (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C1-C4alkyl and C1-C4alkoxy); R3 is H, C1-C4alkyl (optionally substituted with from 1 to 7 halogen atoms), C<sub>1</sub>-C<sub>4</sub>alkyl-S(O)<sub>x</sub>- wherein x is 0, 1 or 2 (optionally substituted with 15 from 1 to 7 halogen atoms), C<sub>1</sub>-C<sub>4</sub>alkoxy (optionally substituted with from 1 to 7 halogen atoms), cyano, halogen, phenyl (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C1-C4alkyl and C1-C4alkoxy), phenoxy (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C<sub>1</sub>-C<sub>4</sub>alkyl and C<sub>1</sub>-C<sub>4</sub>alkoxy) or -CO<sub>2</sub>(C<sub>1</sub>-C<sub>4</sub>alkyl), or together with R2 20 or R4 forms a further benzene ring (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C<sub>1</sub>-C<sub>4</sub>alkyl and C<sub>1</sub>-C<sub>4</sub>alkoxy); R4 is H, C<sub>1</sub>-C<sub>4</sub>alkyl (optionally substituted with from 1 to 7 halogen atoms), C<sub>1</sub>-C<sub>4</sub>alkyl-S(O)<sub>x</sub>wherein x is 0, 1 or 2 (optionally substituted with from 1 to 7 halogen atoms), C<sub>1</sub>-C4alkoxy (optionally substituted with from 1 to 7 halogen atoms), cyano, halogen, phenyl 25 (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C1-C4alkyl and C1-C4alkoxy), phenoxy (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C<sub>1</sub>-C<sub>4</sub>alkyl and C<sub>1</sub>-C<sub>4</sub>alkoxy) or

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-CO<sub>2</sub>(C<sub>1</sub>-C<sub>4</sub>alkyl), or together with R3 forms a further benzene ring (optionally substituted with from 1 to 3 substituents each independently selected from halogen, C<sub>1</sub>-C<sub>4</sub>alkyl and C<sub>1</sub>-C<sub>4</sub>alkoxy); R5 is H, C<sub>1</sub>-C<sub>4</sub>alkyl (optionally substituted with from 1 to 7 halogen atoms) or halogen; R6 is H, C<sub>1</sub>-C<sub>4</sub>alkyl (optionally substituted with from 1 to 7 halogen atoms), C<sub>1</sub>-C<sub>4</sub>alkoxy (optionally substituted with from 1 to 7 halogen atoms) or halogen; R7 is H or C<sub>1</sub>-C<sub>4</sub>alkyl; R8 is H or C<sub>1</sub>-C<sub>4</sub>alkyl; R9 is H, halogen, hydroxy, cyano, C<sub>1</sub>-C<sub>4</sub>alkyl or C<sub>1</sub>-C<sub>4</sub>alkoxy; and R10 is H, halogen, hydroxy, cyano, C<sub>1</sub>-C<sub>4</sub>alkyl or C<sub>1</sub>-C<sub>4</sub>alkoxy; or a pharmaceutically acceptable salt thereof, with the proviso that the compound N-ethyl-N-benzyl-4-piperidinamine is excluded;

a compound of formula (IB):

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wherein Rx is H; Ry is H or C<sub>1</sub>-C<sub>4</sub> alkyl; each Rz is independently H or C<sub>1</sub>-C<sub>4</sub> alkyl; X represents O; Y represents OH or OR; R is C<sub>1</sub>-C<sub>4</sub> alkyl; Ar<sub>1</sub> is a phenyl ring or a 5- or 6-membered heteroaryl ring each of which may be substituted with 1, 2, 3, 4 or 5 substituents (depending upon the number of available substitution positions) each independently selected from C<sub>1</sub>-C<sub>4</sub> alkyl, O(C<sub>1</sub>-C<sub>4</sub> alkyl), S(C<sub>1</sub>-C<sub>4</sub> alkyl), halo, hydroxy, pyridyl, thiophenyl and phenyl optionally substituted with 1, 2, 3, 4 or 5 substituents each independently selected from halo, C<sub>1</sub>-C<sub>4</sub> alkyl, or O(C<sub>1</sub>-C<sub>4</sub> alkyl); and Ar<sub>2</sub> is a phenyl ring or a 5- or 6-membered heteroaryl ring each of which may be substituted with 1, 2, 3, 4 or 5 substituents (depending upon the number of available substitution positions) each independently selected from C<sub>1</sub>-C<sub>4</sub> alkyl, O(C<sub>1</sub>-C<sub>4</sub> alkyl)

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and halo; wherein each above-mentioned C1-C4 alkyl group is optionally substituted with one or more halo atoms; or a pharmaceutically acceptable salt thereof;

a compound of formula (IC)

$$\begin{array}{c|c}
R^1 & A^{R'} \\
R^1 & A^{R'} \\
R^1 & R^{R'} \\
R^1 & R^1
\end{array}$$
(IC)

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wherein: A is S or O; R is H; Ar is a phenyl group optionally substituted with 1, 2, 3, 4 or 5 substituents each independently selected from C<sub>1</sub>-C<sub>4</sub> alkyl, O(C<sub>1</sub>-C<sub>4</sub> alkyl), S(C<sub>1</sub>-C<sub>4</sub> alkyl), halo, hydroxy, CO<sub>2</sub>(C<sub>1</sub>-C<sub>4</sub> alkyl), pyridyl, thiophenyl and phenyl optionally substituted with 1, 2, 3, 4 or 5 substituents each independently selected from halo, C<sub>1</sub>-C<sub>4</sub> alkyl, or O(C<sub>1</sub>-C<sub>4</sub> alkyl); X is a phenyl group optionally substituted with 1, 2, 3, 4 or 5 substituents each independently selected from halo, C1-C4 alkyl, or O(C1-C4 alkyl); a C1-C4 alkyl group; a C3-C6 cycloalkyl group or a CH2(C3-C6 cycloalkyl) group; R' is H or C<sub>1</sub>-C<sub>4</sub> alkyl; each R<sup>1</sup> is independently H or C<sub>1</sub>-C<sub>4</sub> alkyl; wherein each above-mentioned C<sub>1</sub>-C<sub>4</sub> alkyl group is optionally substituted with one or more halo atoms; or a pharmaceutically acceptable salt thereof; with the proviso that, when A is O, X is a C<sub>1</sub>-C<sub>4</sub> alkyl group, a C<sub>3</sub>-C<sub>6</sub> cycloalkyl group or a CH<sub>2</sub>(C<sub>3</sub>-C<sub>6</sub> cycloalkyl) group;

a compound of formula (ID)

$$\begin{array}{c|c}
R^{3} & \downarrow & \downarrow & \downarrow \\
N & \downarrow &$$

wherein -X- is  $-C(R^4R^5)$ -, -O- or -S-; n is 2 or 3;  $R^1$  is H or  $C_1$ - $C_4$  alkyl;  $R^3$  is H, halo,  $C_1$ -20 C<sub>4</sub> alkyl, O(C<sub>1</sub>-C<sub>4</sub> alkyl), nitrile, phenyl or substituted phenyl; R<sup>4</sup> and R<sup>5</sup> are each

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independently selected from H or C<sub>1</sub>-C<sub>4</sub> alkyl; Ar- is selected from the group consisting of

(i) 
$$R^{2a}$$
 and (ii)  $R^{2e}$   $R^{2d}$ 

in which  $R^{2a}$  is H, halo, methyl or ethyl;  $R^{2b}$  is H, halo or methyl;  $R^{2c}$  is H, halo, methyl, trifluoromethyl, nitrile, or methoxy;  $R^{2d}$  is H, halo, methyl or ethyl;  $R^{2e}$  is H, halo, methyl, trifluoromethyl, nitrile, or methoxy;  $R^{2f}$  is H, or fluoro; -Y- is -O-, -S- or -  $N(R^6)$ -; and  $R^6$  is H or methyl or a pharmaceutically acceptable salt thereof;

a compound of formula (IE)

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$$\begin{array}{c|c}
R^2 & R^1 \\
\hline
N & R^3 & R^4
\end{array}$$
(IE)

wherein  $R^1$  is  $C_1$ - $C_6$  alkyl (optionally substituted with 1, 2 or 3 halo substituents and/or with 1 substituent selected from -S-( $C_1$ - $C_3$  alkyl), -O-( $C_1$ - $C_3$  alkyl) (optionally substituted with 1, 2 or 3 F atoms), -O-( $C_3$ - $C_6$  cycloalkyl), -SO<sub>2</sub>-( $C_1$ - $C_3$  alkyl), -CN, -COO-( $C_1$ - $C_2$ 

alkyl) and -OH); C<sub>2</sub>-C<sub>6</sub> alkenyl; -(CH<sub>2</sub>)<sub>q</sub>-Ar<sub>2</sub>; or a group of formula (i) or (ii)

$$(CH_2)_r$$
  $Z$   $(CR^5R^6)_s$   $(CH_2)_r$   $(CR^5R^6)$   $(CH_2)_p$   $(CR^7R^8)_t$   $(CR^7R^$ 

 $R^2$ ,  $R^3$  and  $R^4$  are each independently selected from hydrogen or  $C_1$ - $C_2$  alkyl;  $R^5$ ,  $R^6$ ,  $R^7$  and  $R^8$  are at each occurrence independently selected from hydrogen or  $C_1$ - $C_2$  alkyl; -X- is a bond, -CH<sub>2</sub>-, -CH=CH-, -O-, -S-, or -SO<sub>2</sub>-; -Y- is a bond, -CH<sub>2</sub>- or -O-; -Z is hydrogen, -OH or -O-( $C_1$ - $C_3$  alkyl); p is 0, 1 or 2; q is 0, 1 or 2; r is 0 or 1; s is 0, 1, 2 or 3; t is 0, 1, 2 or 3; Ar<sub>1</sub> is phenyl, pyridyl, thiazolyl, benzothiophenyl or naphthyl;

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wherein said phenyl, pyridyl or thiazolyl group may be substituted with 1, 2 or 3 substituents each independently selected from halo, cyano, C<sub>1</sub>-C<sub>4</sub> alkyl (optionally substituted with 1, 2 or 3 F atoms), -O-(C<sub>1</sub>-C<sub>4</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms) and -S-(C<sub>1</sub>-C<sub>4</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms) and/or with 1 substituent selected from pyridyl, pyrazole, phenyl (optionally substituted with 1, 2 or 3 halo substituents) and phenoxy (optionally substituted with 1, 2 or 3 halo substituents); and wherein said benzothiophenyl or naphthyl group may be optionally substituted with 1. 2 or 3 substituents each independently selected from halo, cyano, C<sub>1</sub>-C<sub>4</sub> alkyl (optionally substituted with 1, 2 or 3 F atoms), -O-(C<sub>1</sub>-C<sub>4</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms), and -S-(C<sub>1</sub>-C<sub>4</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms); Ar2 is naphthyl, pyridyl, thiazolyl, furyl, thiophenyl, benzothiophenyl, or phenyl, wherein said naphthyl, pyridyl, thiazolyl, furyl, thiophenyl, benzothiophenyl, or phenyl may be substituted with 1, 2 or 3 substituents each independently selected from halo, C<sub>1</sub>-C<sub>4</sub> alkyl (optionally substituted with 1, 2 or 3 F atoms) and -O-(C<sub>1</sub>-C<sub>4</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms); or a pharmaceutically acceptable salt thereof; provided that (a) the cyclic portion of the group of formula (i) must contain at least three carbon atoms and not more than seven ring atoms; (b) when -X- is -CH=CH-, then the cyclic portion of the group of formula (i) must contain at least five carbon atoms; and (c) when -Z is -OH or -O-(C<sub>1</sub>-C<sub>3</sub> alkyl), then -X- is -CH<sub>2</sub>-; (d) when -Y- is -O- then p cannot be 0; and (e) the compound 3-[(phenylmethyl)-(3S)-3-pyrrolidinylamino]propanenitrile is excluded;

a compound of formula (IF)

$$(IF)$$

$$R^{2} \stackrel{R^{1}}{\downarrow}$$

$$R^{3} \stackrel{Ar}{\downarrow}$$

wherein

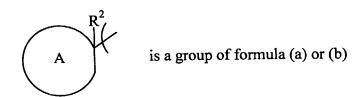
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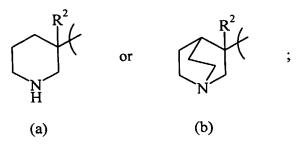
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R<sup>1</sup> is C<sub>1</sub>-C<sub>6</sub> alkyl (optionally substituted with 1, 2 or 3 halo substituents and/or with 1 substituent selected from -S-(C<sub>1</sub>-C<sub>3</sub> alkyl), -O-(C<sub>1</sub>-C<sub>3</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms), -O-(C<sub>3</sub>-C<sub>6</sub> cycloalkyl), -SO<sub>2</sub>-(C<sub>1</sub>-C<sub>3</sub> alkyl), -CN, -COO-(C<sub>1</sub>-C<sub>2</sub> alkyl) and -OH); C<sub>2</sub>-C<sub>6</sub> alkenyl; -(CH<sub>2</sub>)<sub>q</sub>-Ar<sub>2</sub>; or a group of formula (i) or (ii)

$$(CH_2)_r$$
  $Z$   $(CR^5R^6)_s$   $(CH_2)_r$   $(CR^5R^6)$   $(CH_2)_p$   $(CR^7R^8)_t$   $(CR^7R^$ 

 $R^2$ ,  $R^3$  and  $R^4$  are each independently selected from hydrogen or  $C_1$ - $C_2$  alkyl;  $R^5$ ,  $R^6$ ,  $R^7$  and  $R^8$  are at each occurrence independently selected from hydrogen or  $C_1$ - $C_2$  alkyl; -X- is a bond, -CH<sub>2</sub>-, -CH=CH-, -O-, -S-, or -SO<sub>2</sub>-; -Y- is a bond, -CH<sub>2</sub>- or -O-; -Z is hydrogen, -OH or -O-( $C_1$ - $C_3$  alkyl); p is 0, 1 or 2; q is 0, 1 or 2; r is 0 or 1; s is 0, 1, 2 or 3; t is 0, 1, 2 or 3; Ar<sub>1</sub> is phenyl, pyridyl, thiazolyl, benzothiophenyl or naphthyl; wherein said phenyl, pyridyl or thiazolyl group may be substituted with 1, 2 or 3 substituents each independently selected from halo, cyano,  $C_1$ - $C_4$  alkyl (optionally substituted with 1, 2 or 3 F atoms) and -S-( $C_1$ - $C_4$  alkyl) (optionally substituted with 1, 2 or 3 F atoms) and -S-( $C_1$ - $C_4$  alkyl) (optionally substituted with 1, 2 or 3 halo substituents), benzyl and phenoxy (optionally substituted with 1, 2 or 3 halo substituents); and wherein said benzothiophenyl or naphthyl group may be optionally substituted with 1, 2 or 3

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substituted with 1, 2 or 3 F atoms), -O-(C<sub>1</sub>-C<sub>4</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms), and -S-(C<sub>1</sub>-C<sub>4</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms); Ar<sub>2</sub> is naphthyl, pyridyl, thiazolyl, furyl, thiophenyl, benzothiophenyl, or phenyl, wherein said naphthyl, pyridyl, thiazolyl, furyl, thiophenyl, benzothiophenyl, or phenyl may be substituted with 1, 2 or 3 substituents each independently selected from halo, C<sub>1</sub>-C<sub>4</sub> alkyl (optionally substituted with 1, 2 or 3 F atoms) and -O-(C<sub>1</sub>-C<sub>4</sub> alkyl) (optionally substituted with 1, 2 or 3 F atoms); or a pharmaceutically acceptable salt thereof; provided that (a) the cyclic portion of the group of formula (i) must contain at least three carbon atoms and not more than seven ring atoms; (b) when -X- is -CH=CH-, then the cyclic portion of the group of formula (i) must carbon atoms; and (c) when -Z is -OH or -O-(C<sub>1</sub>-C<sub>3</sub> alkyl), then -X- is -CH<sub>2</sub>-; and (d) when -Y- is -O- then p cannot be 0; and

## a compound of formula (IG)

$$\begin{array}{c|c}
& & & & & & & & & & \\
& & & & & & & & \\
R & & & & & & & \\
R & & & & & & & \\
R & & & & & & \\
R & & & & & & \\
R & & & & & & \\
\end{array}$$
(IG)

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wherein -X- is -S- or -O-; each R is independently selected from H or  $C_1$ - $C_4$  alkyl;  $R^1$  is H,  $C_1$ - $C_4$  alkyl,  $C_1$ - $C_4$  alkoxy, halo, cyano, trifluoromethyl, trifluoromethoxy, -NR<sup>3</sup>R<sup>4</sup>, -CONR<sup>3</sup>R<sup>4</sup>, -COOR<sup>3</sup> or a group of the formula (i)

$$-z$$
 $(i)$ 
 $R^5$ ;

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 $R^2$  is  $C_1$ - $C_4$  alkyl, phenyl or phenyl substituted with 1, 2 or 3 substituents each independently selected from  $C_1$ - $C_4$  alkyl,  $C_1$ - $C_4$  alkoxy, nitro, hydroxy, cyano, halo,

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trifluoromethyl, trifluoromethoxy, benzyl, benzyloxy,  $-NR^6R^7$ ,  $-CONR^6R^7$ ,  $COOR^6$ ,  $-SO_2NR^6R^7$  and  $-SO_2R^6$ ;  $R^5$  is selected from  $C_1$ - $C_4$  alkyl,  $C_1$ - $C_4$  alkoxy, carboxy, nitro, hydroxy, cyano, halo, trifluoromethyl, trifluoromethoxy, benzyl, benzyloxy,  $-NR^8R^9$ ,  $-CONR^8R^9$ ,  $-SO_2NR^8R^9$  and  $-SO_2R^8$ ;  $R^3$ ,  $R^4$ ,  $R^6$ ,  $R^7$ ,  $R^8$  and  $R^9$  are each independently selected from H or  $C_1$ -  $C_4$  alkyl; and -Z- is a bond,  $-CH_2$ -, or -O-;

or a pharmaceutically acceptable salt thereof, for the manufacture of a medicament for the treatment of stuttering or another communication disorder.

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3. The method of claim 1 or the use of claim 2, wherein said norepinephrine reuptake inhibitor is atomoxetine hydrochloride.